Most university researchers know a thing or two about interdisciplinary programs. But how many would find a way to combine their music skills—in the form of searing guitar riffs—with their understanding of exercise physiology? That’s taking the idea of “interdisciplinary” to a whole new level.

But that’s just what University of Nevada Cooperative extension Exercise Physiologist Anne Lindsay was able to do when she teamed up with two other Cooperative extension faculty to develop their groundbreaking All 4 Kids: Healthy, Happy, Active, Fit program.

All 4 Kids tackles the growing problem of obesity in children from low-income families in Nevada by combining dance, games, books and food tasting to teach children about health and the importance of movement and a good diet.

It is the first program of its kind to tailor its message to preschoolers, who are forming eating and exercise habits that will last a lifetime. The program recently received a $1.1 million National Institute of Food and Agriculture (NIFA) grant to study the behavioral factors that affect childhood obesity.

Lindsay developed the program with Cooperative Extension Southern Area faculty Madeleine Sigman-Grant, a specialist in maternal-child health and nutrition, and Teresa Byington, an early care and education specialist. The three have brought their diverse skills together to design a curriculum that is rapidly spreading across the country.

“(The program) has just kind of evolved,” Sigman-Grant says. “Each of us knew we couldn’t tackle the program with just nutrition education or just exercise education. We needed both and we needed to be able to deliver it to a preschool audience. So everyone’s expertise was essential to making the program work.”

The music videos produced for the program—one of which features Lindsay, a professional musician, on lead guitar—have been sold to Cooperative Extension educators in 10 states, and links to the program’s popular YouTube videos have been forwarded to First Lady Michelle Obama, who has made childhood obesity one of her top priorities. The $1.1 million NIFA grant, in addition to funding research on why some families adopt healthy eating and exercise habits while others don’t, will also help expand All 4 Kids to other states.

“The program is a great example of how three different faculty members can bring together their expertise in different areas to design a program that can have tremendous impacts,” says Cooperative Extension Dean and Director Karen Hinton. “What Anne, Madeleine and Teresa are accomplishing with All 4 Kids is truly amazing.”
How does the program work?

A 2007 Centers for Disease Control and Prevention study found that Nevadans’ consumption of fruit and vegetables was declining and that the prevalence of overweight children from 2 to 5 years old had increased from 11.6 percent in 1997 to nearly 15 percent in 2006. A survey by Byington of all licensed child care workers in southern Nevada revealed that nine out of 10 felt the issue of overweight children in America is a problem.

All 4 Kids focuses on lower-income preschoolers, who are twice as likely to be overweight than higher-income preschoolers. Extension educators go into child care centers three times a week for eight weeks to teach 3- to 5-year-olds and their teachers a 30-minute lesson on healthy food and the importance of staying active. Each lesson utilizes dance to introduce children to specific movements. Parents attend family events three times during the course of the program and preschool teachers learn ways to extend the All 4 Kids information into their daily curriculum.

The percentage of All 4 Kids children eating fresh fruit at least three times a week has increased from 83 percent to nearly 92 percent, and children eating fresh vegetables three times a week has jumped from 62 percent to 92 percent.

Along with healthy eating, preschoolers enrolled in All 4 Kids learn healthy living habits too. Head Start Center Director La Tanya Polk Johnson said after her son Terrence participated in the program, she noticed he became much more active, even when watching television.

“During commercial breaks, he’ll get up and move around. The kids learn to stay active and not just sit around.”

Byington says preschool is the ideal time for children to learn “good lifetime habits.”

“The program encourages children to eat fruits and vegetables every day and to choose healthy snacks,” Sigman-Grant adds. “Children learn to eat when they are hungry and to stop when they are full. They learn how physical activity will help keep their hearts, muscles and bones strong.”

A family pack is sent home once a week with activities the child can share with the rest of the family, Byington said. One activity is the “TV Moves Me” coloring book, which encourages families to move together during television commercials, and the “Healthy Snack Hunt” game, which teaches children and their parents healthy snacks are affordable and tasty. During family events, which are held at the preschoolers’ child care centers, the parents and children try new foods and dance together.

Program videos are a big hit

The All 4 Kids CD/DVD produced specifically for the program has also been popular with participants. Lindsay enlisted the help of many Las Vegas performers to record different dance music videos, including one with a country-western tempo, another with a Latin beat and one with hip-hop music.

Lindsay helped write the video script and compose the songs. All told, more than 100 volunteers worked on the videos.

The dance choreography incorporates movements that help children meet Pre-Kindergarten standards for physical development. “Preschoolers learn to move their whole bodies, building confidence to promote more successful physical activity experiences when entering grade school,” Lindsay says. As part of the $1.1 million grant, a preschool movement assessment developed to measure movement skills will be tested for reliability. Accelerometers are also used to measure changes in children’s physical activity levels.

The aim of the program is to tackle obesity before it occurs. Sigman-Grant notes that most eating and activity behaviors are established in childhood, and that inadequate and inappropriate food consumption can retard growth, cognitive development, learning and the immune system.

“All you can do is expose them to new foods,” Lindsay says. “We like to say, ‘you may not like the taste of it now, but as you get older, you’ll get an adult taste and then you’ll like it.’

“There’s actually a funny story we like to tell about a little girl who said she didn’t like broccoli when she was 4, but she told us, ‘now that I’m 5, I like it.’”

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